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Trading in beef cattle futures contracts opended November 30, 1964, on the Chicago Mercantile Exchange. Contracts were established with Choice grade slaughter steers as the deliverable commodity. Futures trading in beef carcasses was initiated in February 1965.

This article has been prepared to provide a basic understanding of the principles and concepts of trading beef futures. It defines a futures market and futures trading, explains the purpose of futures trading, and illustrates how the beef futures market operates.

THE BEEF FUTURES CONTRACT

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A beef futures contract is simply an agreement to deliver or receive a specified amount and quality of beef in a specified month at a specific price agreed upon by the buyer and seller.

Really, the use of futures contracts is not new to the cattle industry. During the summer months, ranchers often contract feeder cattle and calves for fall delivery. On the West Coast, in particular, feeders have contracted with feedlots to deliver cattle at a specified price at a future date for many years. In this respect, the futures contract and the feeder and packer contracts are similar. However, there are several differences between a beef futures contract on a futures exchange and the feeder contracts:

Beef futures are traded on organized commodity futures market designed especially to handle these transactions.

Beef futures have standard terms. On the Chicago Mercantile Exchange these call for Choice grade live steers.

Beef futures are largely non-personalized paper transactions.

Beef futures generally do not involve actual delivery of the commodity.

FULFILLMENT

A beef futures contract may be fulfilled by taking or making delivery. In most cases, the person who has bought a contract will sell an offsetting one prior to the delivery date—thus cancelling or removing his obligation. Similarly, a trader who has sold a contract may later buy back an offsetting one before delivery time. In these cases, the beef futures trader only pays the difference between the offsetting contracts, neither taking nor accepting delivery, as in the example below.

	Transactions in Futures Contracts (June Delivery)		
	Date	Transaction	Result
Α.	Today	Buy contract for June delivery	Obligation to accept delivery of com-
	before June	Sell contract for June delivery	modify in June is offset or cancelled by sale of contract before delivery date.
or B.	Today	Sell contract for June delivery	Obligation to deliver commodity in
	before June	Buy contract for June delivery	date

OFFSETTING OR CANCELLING Transactions in Futures Contracts (June Delivery)

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Records from futures trading in other commodities show that only one or two percent of the volume traded is ever delivered. Nevertheless, the contract must be deliverable and the buyer or seller must take or make delivery—if he has not executed an offsetting contract.

TYPES OF FUTURES TRADERS

Before we look at how the beef futures market actually operates, we should look at the two types of traders who use the market—the speculator and the hedger.

The speculator's only motive is to make a profit. The speculator usually feels he can do a good job of estimating market trends, and buys and sells contracts to make a profit. This is his only reason for being in the market. He usually will not take delivery, but will buy offsetting contracts. He may take delivery if he can make a profit by doing so. A large proportion of the trading is done by speculators who through their actions perform a very useful function which will be explained later.

The hedger uses futures contracts as a form of insurance against price changes. For example, a cattle feeder can use the purchase and a sale of futures contracts to protect his normal or usual feeding margin during the period that he has cattle on feed, to protect himself from the possibility of decline in fat cattle prices during this period.

MECHANICS OF BEEF FUTURES TRADING

Brokers execute orders for the purchase and sale of futures contracts. A beef futures broker funnels orders to the exchange floor where the contracts are bought and sold openly by bid and offer. These are bought and sold by members of the exchange who shout out or signal their price. Once a transaction is completed, it is recorded by the exchange and the brokers notify their respective customers.

All futures transactions, whether buying or selling, require a margin deposit. For beef cattle contracts, the current minimum initial margin or deposit is \$500 per contract. An individual deposits the money with his broker, who maintains a separate account for each customer. Additional margin may be required if the value of the contract changes adversely. Margin may be withdrawn if the value of the contract changes favorably.

Brokers charge a commission on each contract bought or sold. At present the commission on beef cattle futures is \$36 per contract. This includes both buying and selling. On the date that the contract is closed out, the individual's account is adjusted for any profit or loss.

The mechanics of trading commodity futures contracts is very similar to that of stock transactions, where corporation shares are bought and sold.

HEDGING OPERATIONS

The role of the speculator in the commodity futures market is often misunderstood. While the speculator buys and sells contracts strictly to make a profit, in so doing he performs a very important function for the person who is using the market as a hedge against price changes.

A hedger is in and out of the market at different times. For example, a feeder will sell futures contracts when he buys replacement cattle to put on feed. When he has the cattle finished and ready to send to slaughter he will buy futures contracts—offsetting the ones he sold earlier. When the hedger wants to sell contracts, there must be somebody ready to buy these contracts. He may not be able to find another hedger who wants to buy a contract at the exact time and price he wants to sell one—or someone who wants to buy as many contracts as he wants to sell.

This is where the speculator comes in. The speculator performs this very important function in a futures market by standing ready to buy or sell contracts offered by the hedger. More often than not, a speculator is a buyer or seller on the other end of the transaction from a hedger rather than another hedger.

The following example illustrates how a feeder can use hedging to protect his normal return from feeding.

FEEDER'S HEDGING OPERATION

Assume 500 lb. feeder steers are purchased, fed 180 days and sold as 1000 lb. Choice slaughter steers.

Cash Market	Futures Market	Result
Buy 100 head feeders @ \$22.50/cwt today for a cost of \$11,250 Compute feeding cost @ \$22/cwt gain for a cost of \$11,000 Total cost is \$22,250 A. If Slaughter Price Remains \$24.50/cwt Sell 100 head 1,000 lb. Choice	 Sell futures contracts for 100,000 lb. Choice steers @ \$24.50/cwt today Total received is \$24,500 t 6 months from today Buy futures contracts for 100,000 lb. Choice steers @ \$24,50/cwt 	Net return is \$24,500, less \$22,250 cost, less \$144 commission on future contracts
Total return is \$24,500	Total cost is \$24,500	φ2,200.

FEEDER'S HEDGING OPERATION

Assume 500 lb. feeder steers are purchased, fed 180 days and sold as 1000 lb. choice slaughter steers.

Cash Market	Futures Market	Result
Buy 100 head feders @ \$22.50/cwt today for a cost of \$11,250 Compute feeding cost @ \$22/cwt gain for a cost of \$11.000	Sell futures contracts for 100,000 lb. Choice steers @\$24.50/cwt today Total received is \$24,500	
B. If Slaughter Price Drops to \$21.00/cwt 6 months from today Sell 100 head 1,000 lb. Choice slaughter steers @ \$21/cwt Buy futures contracts for 100,00 lb. Choice steers @ \$21/cwt Total return is \$21.000 Total cost is \$21,000		Net return is \$21,000, less \$22,250 cost, plus \$3,500 profit on futures contracts, less \$144 commission=\$2,106
C. If Slaughter Price Advances to \$27/cwt Sell 100 head 1,000 lb. Choice slaughter steers @ \$27.00/cwt Total return is \$27,000	6 months from today Buy futures contracts for 100,000 lb. Choice steers @ \$27/cwt Total cost is \$27,000	Net return is \$27,000, less \$22,250 cost, less \$2,500 loss on futures contracts, less \$144 commission= \$2,106.

From this example we can draw several conclusions concerning hedging:

The basis for hedging is a relationship in price movements over time in the cash and futures markets. That is, we assume that price changes are in the same direction and nearly the same amount in the two markets. (We shall discuss exceptions to this later.)

Hedging requires that opposite transactions be carried out in the two markets at the same time. When a purchase is made in the cash market, futures contracts are sold, and vice versa.

Hedging provides insurance for price changes in both directions. When cash prices drop, a profit in the futures market offsets the loss. However, when the cash price rises, a loss in the futures market wipes out the windfall gain. For this reason all costs, including return to capital, labor, and management should be included in computing feeding costs.

The only explicit cost of hedging is the brokerage fee or commission paid on futures contract transaction. This basic charge of \$36 per 25,000 lb. liveweight contract can be considered the "premium" cost of the price insurance provided by hedging.

The example used demonstrates a perfect hedge—that is, where the price changes in the cash and futures markets were exactly the same, with the gain in one market exactly offsetting the loss in the other—leaving the feeder his normal feeding return. In actual practice, the cash and futures markets seldom move by exactly the same amount. As a result, a perfect hedge is unusual.

In one hedging transaction, a hedger may gain more in the futures market than he lost in the cash—so that he has a net gain from futures trading in addition to his normal return. The reverse can also occur. As a result in actual operation, the feeder may receive through a series of hedging operations more or less than his normal return because of the imperfections in hedging. Nevertheless, over a period of time he can expect to average about his normal return thus protecting himself from wide price swings and the possibility of substantial loss.

FUTURES AND THE PRODUCER

Before examining how the futures market may apply to cow and calf producers, let's examine the **relationship between cash prices and futures prices.** For example, take the April futures quotation. This price represents an estimate of what people think Choice slaughter steer prices will be in April. In other words, this is what a buyer says he will be willing to pay for Choice slaughter cattle delivered in April—or what a seller will be willing to take.

Choice 1,000-1,400 lb. slaughter steers at Chicago in January 1965 were selling at \$24.50 per cwt. The April futures price quotation on January 6 was \$23.45 per cwt. As the delivery month (April) approaches, the cash and futures prices must come together. See below. In other words, the cash price will have to come down or the futures price come up so that the two tend to come together as delivery month approaches. This, of course, has to be. If the April futures quotation is what people expect prices to be, then when April arrives there is only one price for Choice slaughter steers. (Allowing for differences in quality and transportation costs.)



We have shown how the feeder is in a good position to use the futures market because contracts apply to fed cattle, but few cow-calf producers finish out their own calves. If slaughter and feeder cattle prices consistently moved in the same direction together, the cow-calf producer could establish a fairly good hedge based on slaughter cattle futures price quotations.

In general, feeder cattle prices respond to current changes in fed cattle prices-but there are times, such as last summer and fall, when they move differently. Let's examine this relationship. Feeder steer prices from June 1963 until March 1964 followed fed cattle prices fairly well. But since March 1964 feeder cattle prices dropped more rapidly than fed cattle prices, and failed to recover as much as did slaughter prices last summer. The new slaughter cattle futures market would have provided the cattle feeder a fairly good hedge or protection against price changes of this kind. However, it would have afforded only limited protection to the cow-calf producer, basing his hedge on slaughter cattle futures and selling his cattle in the feeder cattle market.

Over a long period of time feeder cattle prices generally fluctuate more widely than fed cattle prices. Both fed cattle prices and feed costs are reflected back to feeder cattle prices. Recent feeder and slaughter steer prices are shown.



The rancher ordinarily does not have cattle in the form of the finished product deliverable against the futures contract. As a result, he could achieve only an indirect and imperfect hedge in the futures market. Direct arrangements between ranchers and feedlot operators for future delivery of feeders are also a form of hedging. However, this is often an inactive or sporadic market.

A futures market for feeder cattle would provide the producer a more direct form of hedge, and thus more protection. A feeder cattle futures market has never been proposed, and there is a real question that there would be enough volume of trade to justify establishing a market.

Packers and retailers are reported to have shown a mixed reaction to the cattle futures market. Packers and retailers ordinarily have a rapid turnover and retain ownership of a particular lot of cattle or beef only for a short period of time—a week to two weeks. Price risks are greater the longer the period of ownership.

For these reasons, packers and retailers in general have not shown much interest in futures trading. However, interest has been expressed by some individual firms. The offering of carcass beef futures contracts may result in greater interest for packers and retailers.

HOW A PACKING COMPANY MIGHT HEDGE

Assume that a large packing company has a monthly slaughter requirement of 10,000 steers worth \$2.5 million in the current market. Instead of actually purchasing these live cattle needed for the next 30 days kill, the packer can buy futures contracts for the delivery of 10,000 head of steers on specified dates, thereby giving him the assurance of receiving fat cattle at a known price, and at the same time releasing 90 percent of the cash he would have had tied up in these steers. This would enable the packer to put his funds to work elsewhere. Retailers could use the futures market in a similar manner, particularly a carcass futures market.

CONCLUSIONS

What can we expect of futures trading? First, a futures contract will provide a way to transfer price risk. Second, it should stabilize prices in the longer run (6 months to 1 year) by eliminating the more extreme highs and lows in price fluctuations. Third, futures price quotations should give an indication of future price levels and trends. Fourth, a beef cattle futures market may give additional incentive towards quality standardization in live animals and carcass beef.

The individual feeder should achieve a form of price stability once he hedges his product. The influence of the futures market in helping to stabilize prices applies only to the longer run that is, several months or a year. Since speculators are the more active traders in futures contracts, there is a tendency toward wide fluctuation of prices over short time periods. Studies of other commodity futures markets, however, indicate that the futures market has tended to stabilize prices over a longer period of time. But day to day prices can vary more, or at least as much, as they have in the past.

Based on the present situation, the greatest use of the cattle futures market, other than speculation, is expected to be made by feeders, with packers and retailers using the market to a lesser extent. Little use of the market is expected to be made by cow-calf producers, unless they are finishing out their own cattle. The development of a carcass futures market may promote more use by packers and retailers.

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